

Abstract

A Service Level Agreement (SLA) defines the contract between a cloud provider and a cloud customer, detailing the resources being provided, the price the user will pay, and the quality of service (QoS) guarantees that the cloud provider ensures for the customer. If the QoS guarantees are not upheld, typically the cloud provider is assessed some penalties, such as payment credit for the customer. Monitoring and enforcing the SLA is an area of open research, and in this paper we present the foundations towards a full realization of an SLA monitoring infrastructure. We begin by presenting a formal model that can precisely describe both the SLA QoS guarantees and the penalties assessed for violation, and also describe how this model will be used for automatic SLA enforcement.